



SBR05U20LP

0.5A SBR®

Surface Mount Super Barrier Rectifier

Features

- Ultra Low Forward Voltage Drop
- Superior Reverse Avalanche Capability
- Patented Super Barrier Rectifier Technology
- Soft, Fast Switching Capability
- 150°C Operating Junction Temperature
- **Lead Free Finish, RoHS Compliant (Note 1)**
- **“Green” Molding Compound (No Br, Sb)**

Mechanical Data

- Case: DFN1006-2
- Case Material: Molded Plastic, “Green” Molding compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminal Connections: Cathode Dot
- Terminals: Finish - NiPdAu annealed over Copper leadframe. Solderable per MIL-STD-202, Method 208 (e3)
- Marking Information: See Page 3
- Ordering Information: See Page 3
- Weight: 0.001 grams

Maximum Ratings @ T<sub>A</sub> = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	20	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
DC Blocking Voltage	V <sub>RM</sub>		
RMS Reverse Voltage	V <sub>R(RMS)</sub>	14	V
Average Rectified Output Current (See Figure 1)	I <sub>O</sub>	500	mA
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	5	A
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150	°C

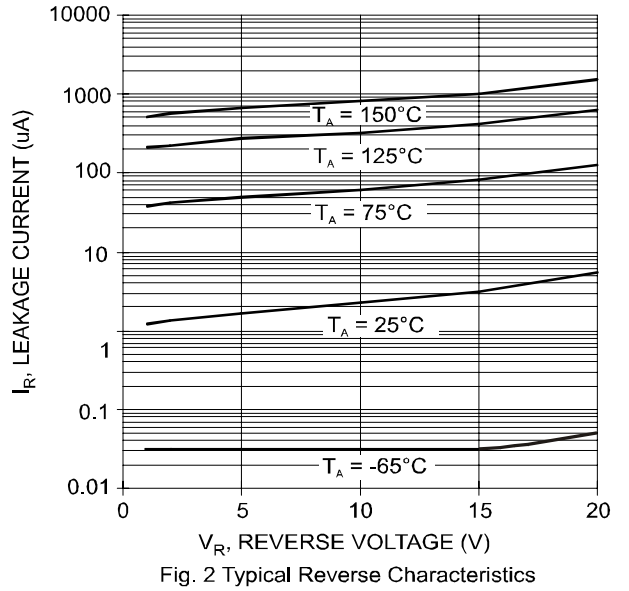
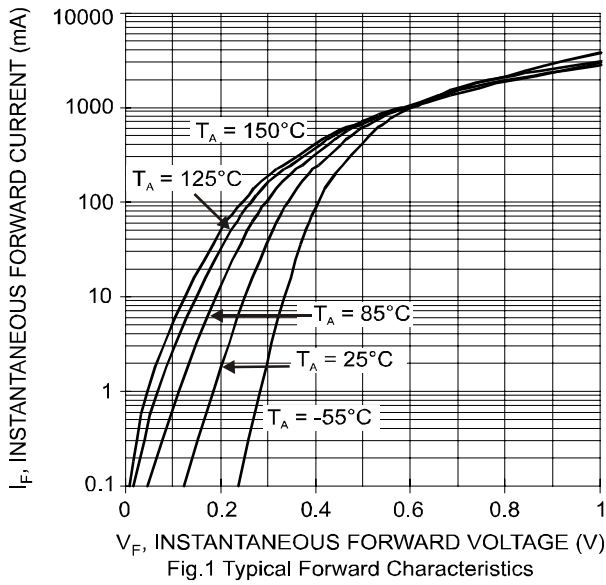
Electrical Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	V <sub>(BR)R</sub>	20	-	-	V	I <sub>R</sub> = 50 μA
Forward Voltage Drop	V <sub>F</sub>	-	0.34	0.38	V	I <sub>F</sub> = 0.1A, T <sub>J</sub> = 25°C
			0.25	0.28		I <sub>F</sub> = 0.1A, T <sub>J</sub> = 150°C
			0.39	0.43		I <sub>F</sub> = 0.2A, T <sub>J</sub> = 25°C
			0.31	0.34		I <sub>F</sub> = 0.2A, T <sub>J</sub> = 150°C
			0.47	0.50		I <sub>F</sub> = 0.5A, T <sub>J</sub> = 25°C
			0.43	0.46		I <sub>F</sub> = 0.5A, T <sub>J</sub> = 150°C
Leakage Current (Note 2)	I <sub>R</sub>	-	6	50	μA	V <sub>R</sub> = 20V, T <sub>J</sub> = 25 °C
			1.5	5	mA	V <sub>R</sub> = 20V, T <sub>J</sub> = 150 °C

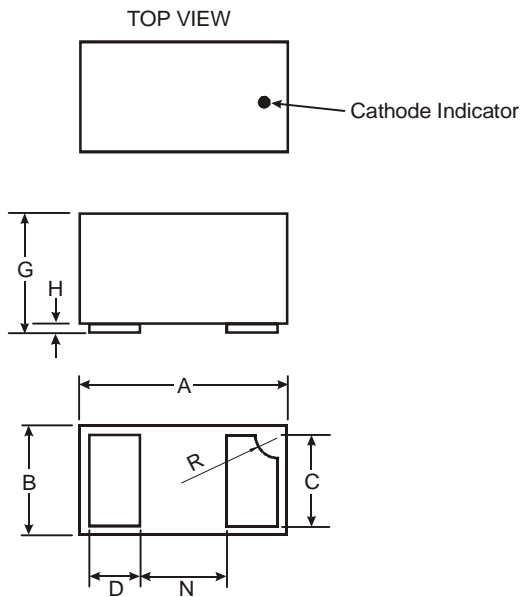
Notes: 1. RoHS revision 13.2.2003. High temperature solder exemption applied, see EU Directive Annex Note 7.  
2. Short duration pulse test used to minimize self-heating effect.

NEW PRODUCT





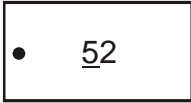


**Package Outline Drawing**



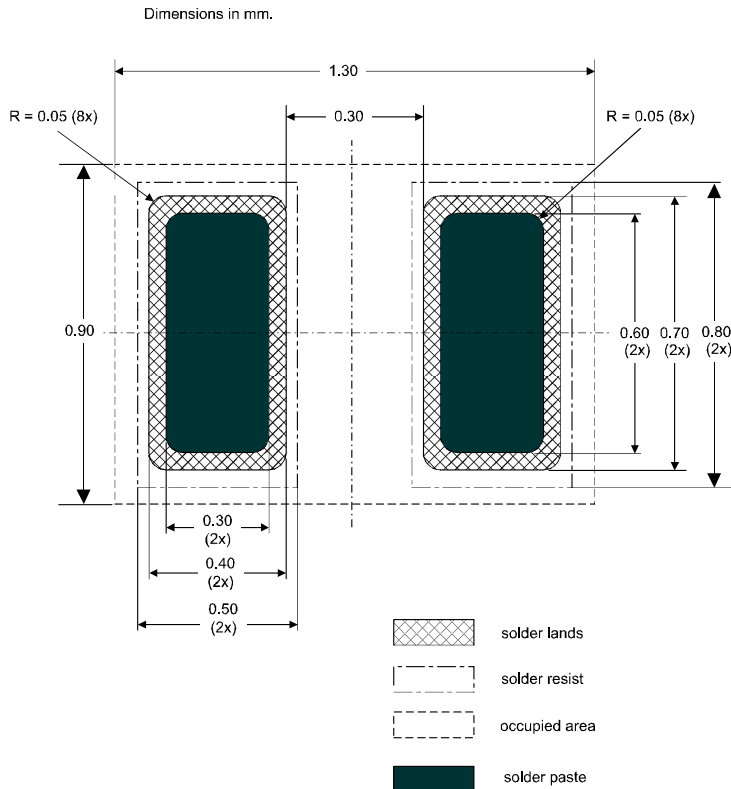
DFN1006-2			
Dim	Min	Max	Typ
A	0.95	1.075	1.00
B	0.55	0.675	0.60
C	0.45	0.55	0.50
D	0.20	0.30	0.25
G	0.47	0.53	0.50
H	0	0.05	0.03
N	—	—	0.40
R	0.05	0.15	0.10
All Dimensions in mm			

**Marking, Polarity, Weight & Ordering Information**

SBR05U20LP	Case Style (DFN1006-2)		Marking	Weight
	 Top View	 Back View		0.001g (approx.)

Ordering Information	Date Code
SBR05U20LP-7 3000/Tape & Reel	52 = Product Type Marking Code Dot Denotes Cathode Side

**Suggested Pad Layout**



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